

Serial No. 10/520,311

Reply Brief in Reply to Examiner's Answers of July 22, 2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket: NL 020663

MICHEL PAUL BARBARA VAN BRUGGEN ET AL.

Confirmation No. 2504

Serial No. 10/520,311

Group Art Unit: 1793

Filed: JANUARY 5, 2005

Examiner: VIJAYAKUMAR, K.M.

Title: TRANSPARENT POLYCRYSTALLINE ALUMINUM OXIDE

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United States Patent and Trademark Office
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APPELLANTS' REPLY BRIEF

Sir:

In response to the Examiner's Answers mailed on July 22, 2008,
please consider the following remarks:

REMARKS

Appellants maintain the arguments submitted in the Appeal Brief filed on May 13, 2008, and the Supplemental Brief filed on June 5, 2008, which are incorporated herein by reference. Appellants thank the Examiner for pointing out that the claims 11-20, and not claims 1-10 remain rejected in the Status of the Claims, and that the Grounds Of Rejection To Be Reviewed On Appeal include claims 11-20, instead of only independent claims 11, 14 and 16. Further, Appellants respectfully refute the allegations made in the Examiner's Answer of July 22, 2008.

For example, on page 12 of the Examiner's Answer, it is admitted that:

they were in no way to express their transmission values in terms of Applicant's RIT that was published in March 2003. (Emphasis added)

That it, the Examiner correctly admits that Yamamoto (being U.S. Patent No. 6,417,127 or EP 1053983) does not disclose or suggest any RIT (real in-line transmission). It logically follows that Yamamoto also does not disclose or suggest any RIT values, such as $RIT \geq 30\%$, as recited in independent claims 11, 14 and 16.

The present specification (of U.S. Application Serial No. 10/520,311), on page 3, lines 1-12, discusses Yamamoto noting that the equivalent or a corresponding RIT value in Yamamoto for a zirconia free microstructure is 25%. Page 4, lines 13-16 continue and specifically state, after clearly analyzing structures disclosed in Yamamoto, that a "transparent Al_2O_3 component with a value for the RIT of at least 30% measured over an angular aperture of at most 0.50 at a sample thickness of 0.8mm and with a monochromatic wavelength of light λ and having an acceptable strength is therefore unknown." (Illustrative emphasis added)

Thus, any transmittance values in Yamamoto convert to at most an RIT of 25%. There is simply no disclosure or suggestion in Yamamoto, Castro (U.S. Patent Publication No. 2003/0125189), and combination thereof of a polycrystalline alumina component which is transparent with a real in-line transmission $\text{RIT} \geq 30\%$ measured over an angular aperture of at most 0.5° at a sample thickness of 0.8mm and with a single wavelength of light λ , and wherein the additive comprises Mg oxide, as recited in independent claims 11, 14 and 16.

In addition, on page 12 of the Examiner's Answers, paragraph two, the Examiner correctly notes that carbon and diamond have different crystal structures, yet have the identical chemical composition. It is alleged that the prior art compositions of polycrystalline alumina have a similar crystal structure as recited in the claims. Appellants respectfully disagree and point out that the prior art, although similar, is not similar enough, as the Yamamoto composition has an equivalent RIT of 25% at best, while the present invention as recited in independent claims 11, 14 and 1, include RIT \geq 30%, with a single wavelength of light λ , where λ may be 645nm as recited in claims 19-20.

It is respectfully submitted that even with any adjustment for wavelength, there is still no disclosure or suggestion in Yamamoto of a composition having RIT \geq 30%, measured over an angular aperture of at most 0.5° at a sample thickness of 0.8mm, as recited in independent claims 11, 14 and 1. Thus, it is respectfully submitted that a prima facie case of obviousness has not be established.

Surely, Yamamoto would have disclosed a microstructure with an

RIT of at least 30%, if the ceramic of Yamamoto did indeed have such properties, particularly since Yamamoto strives "to provide a translucent polycrystalline ceramic having a good strength and hardness, capable of transmitting light through the ceramic."

(Yamamoto-EP 1053983A2, page 2, paragraph [0007]; emphasis added)

Accordingly, it is respectfully submitted that independent claims 11, 14 and 16 should be allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 12-13, 15 and 17-20 should also be allowed at least based on their dependence from independent claims 11, 14 and 16.

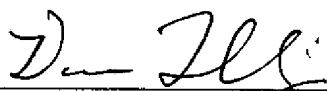
In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 11-20 are patentable over Castro and Yamamoto (being U.S. Patent No. 6,417,127 and/or EP 1053983).

In view of the above, it is respectfully submitted that the Examiner's rejection of claims 11-20 should be reversed.

Respectfully submitted,

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September 15, 2008

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